SN: ~ssigned   Agilent Case No.: 10030825-1
Inve___r(s): Keithley, et al.
Title: Fixed Frequency Clock Output Having A Variable
High Frequency Input Clock And An Unrelated Fixed Frequency
Reference Signal
Pam Kee @ 408-553-3059
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Figure 1

FIGURE 2

SN: Uns   ned   Agilent Case No.: 10030825-1
Inventor⟨s⟩: Keithley, et al.
Title: Fixed Frequency Clock Output Having A Variable
.High Frequency Input Clock And An Unrelated Fixed Frequency
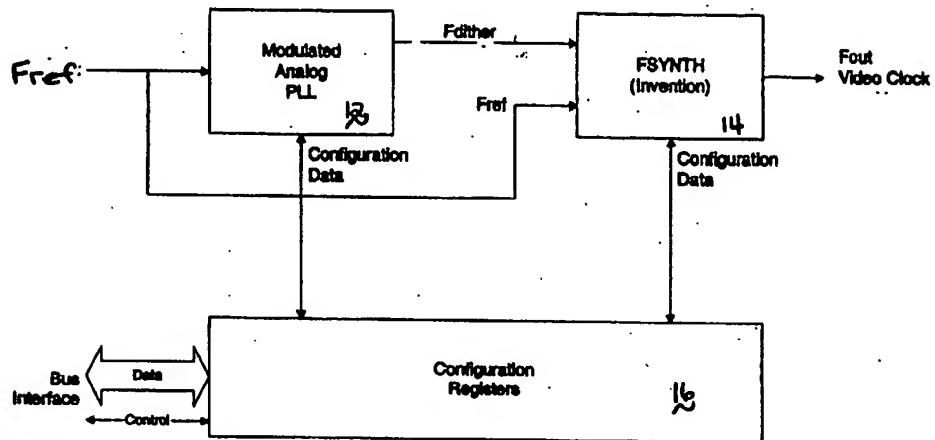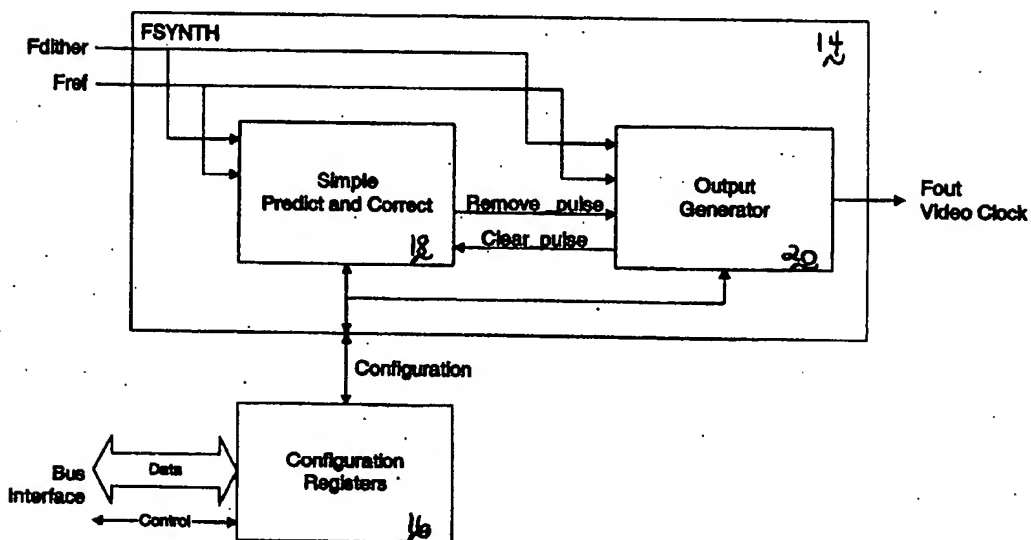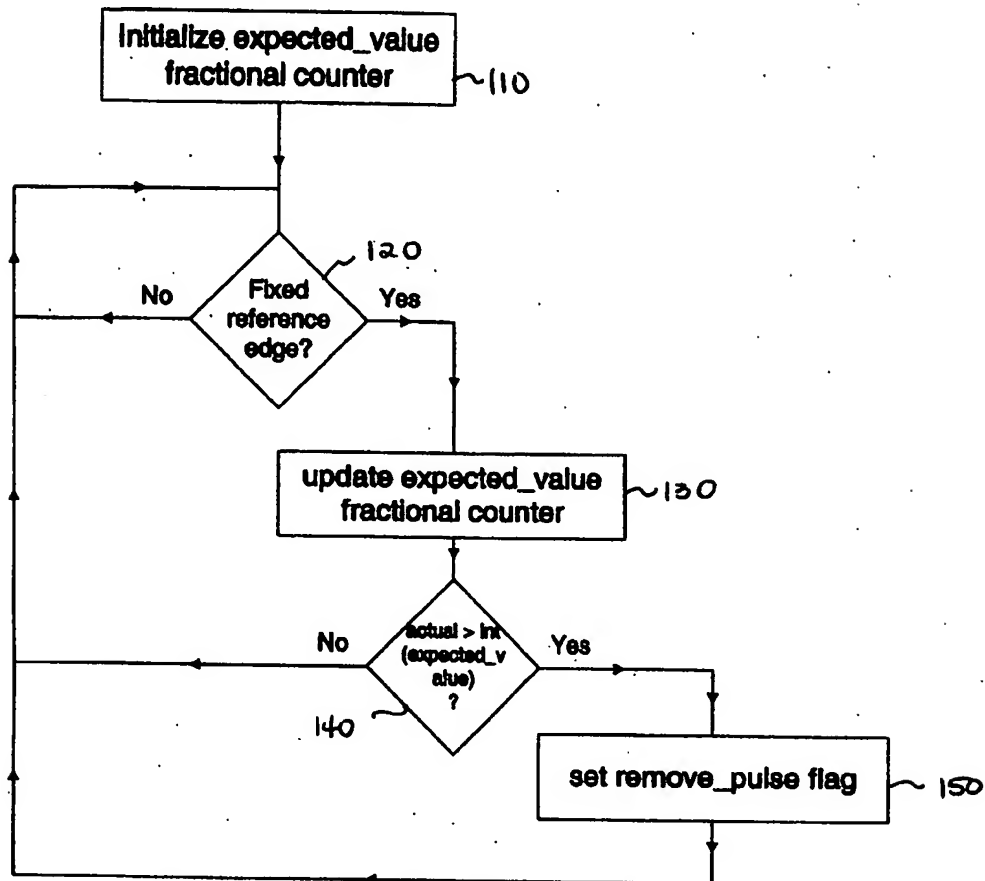Reference Signal.
Pam Kee @ 408-553-3059
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100

```
        ┌─────────────────────────┐
        │ Initialize expected_value│
        │    fractional counter    │ ~110
        └─────────────────────────┘
                     │
                     ▼
            ╱─────────────╲
      No   ╱     Fixed      ╲   Yes      120
     ◄─────    reference      ────►
            ╲     edge?      ╱
             ╲─────────────╱
                     │
                     ▼
        ┌─────────────────────────┐
        │  update expected_value  │ ~130
        │    fractional counter   │
        └─────────────────────────┘
                     │
                     ▼
            ╱─────────────╲
      No   ╱ actual > int  ╲   Yes
     ◄─────  (expected_v     ────►
            ╲    alue)      ╱
             ╲     ?       ╱
         140  ╲─────────────╱
                                  │
                                  ▼
                    ┌─────────────────────────┐
                    │  set remove_pulse flag   │ ~150
                    └─────────────────────────┘
```

FIGURE 3

SN: Unassigned   Agilent Case No.: 10030825-1
Inver   (s): Keithley, et al.
Title.___xed Frequency Clock Output Having A Variable
High Frequency Input Clock And An Unrelated Fixed Frequency
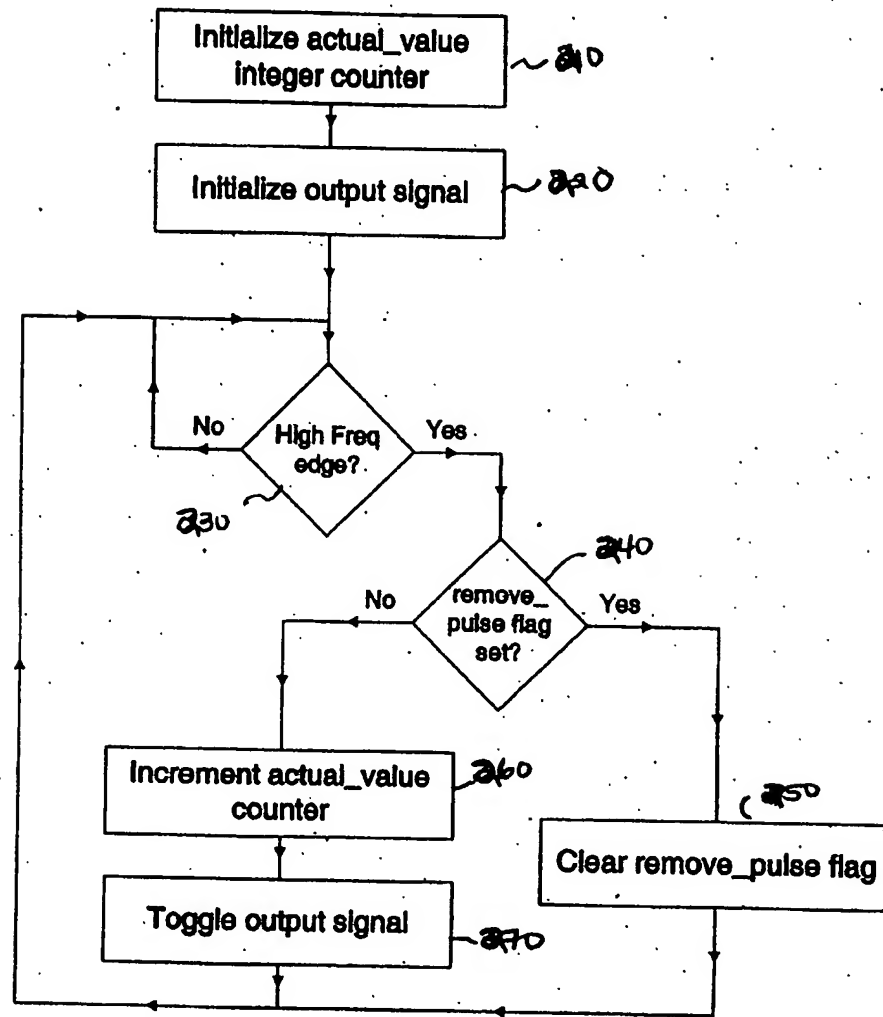Reference Signal
Pam Kee @ 408-553-3059
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209

FIGURE 4

SN: Unassigned   Agilent Case No.: 10030825-1
Inventor(s): Keithley, et al.
Title: Fixed Frequency Clock Output Having A Variable
High Frequency Input Clock And An Unrelated Fixed Frequency
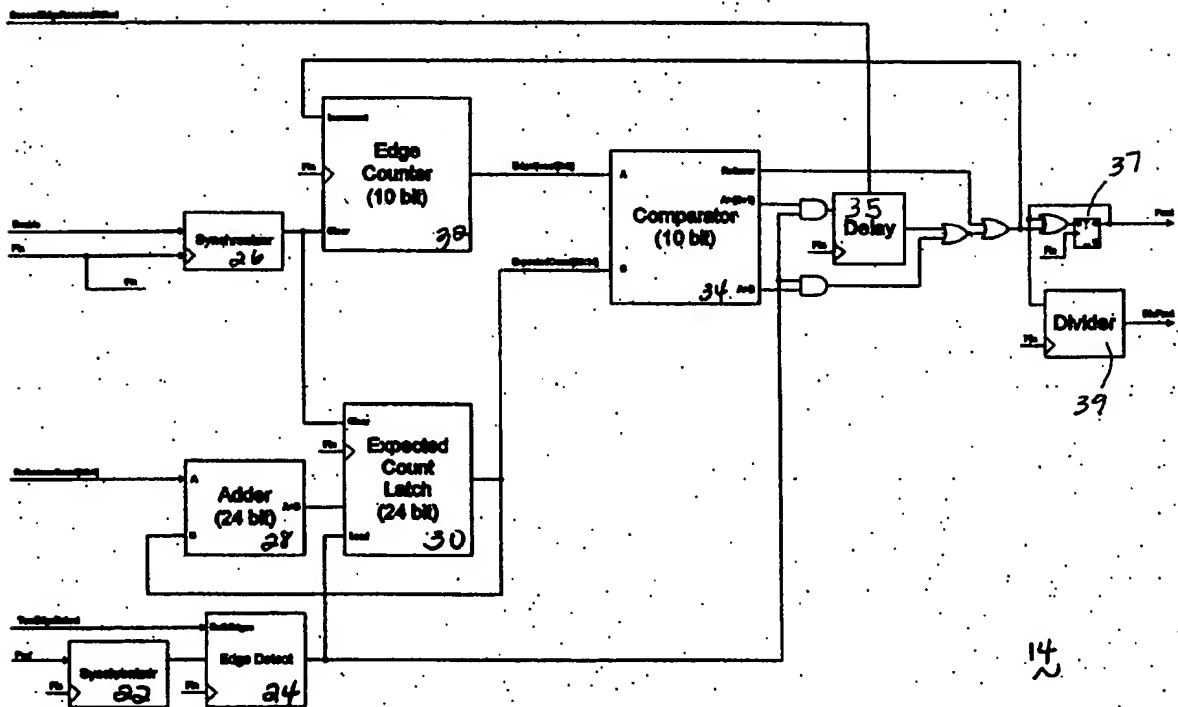Reference Signal
Pam Kee @ 408-553-3059
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FIGURE 5

S   Unassigned   Agilent Case No.: 10030825-1
Inventor(s): Keithley, et al.
Title: Fixed Frequency Clock Output Having A Variable
High Frequency Input Clock And An Unrelated Fixed Frequency
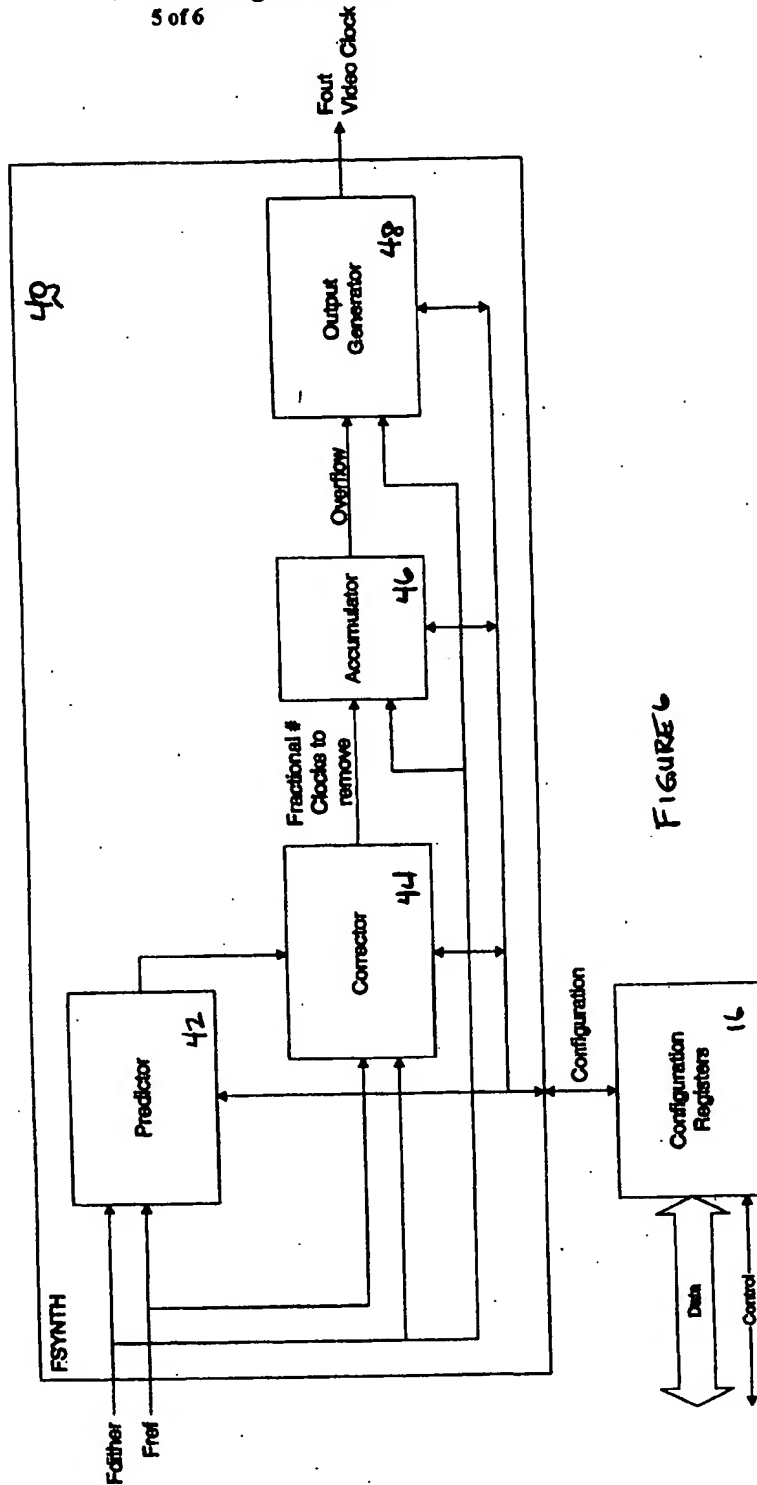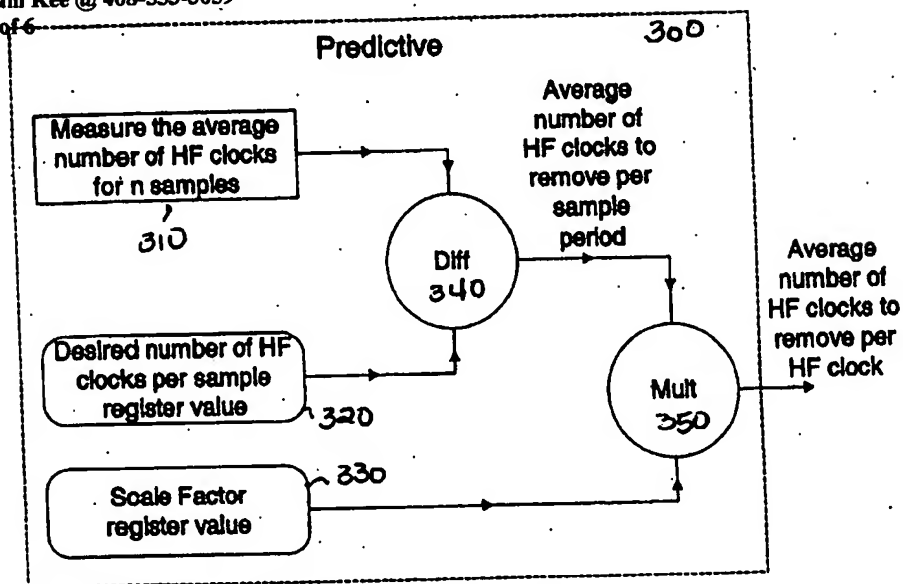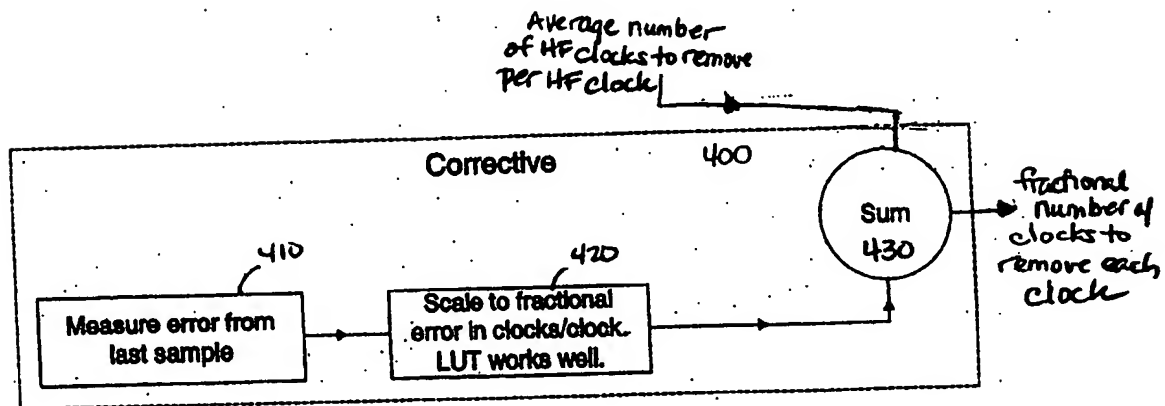Reference Signal
Pam Kee @ 408-553-3059
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FIGURE 6

Predictive

300

Measure the average number of HF clocks for n samples

310

Desired number of HF clocks per sample register value

320

Scale Factor register value

330

Average number of HF clocks to remove per sample period

Diff 340

Mult 350

Average number of HF clocks to remove per HF clock

FIGURE 7

Average number of HF clocks to remove per HF clock

Corrective

400

Measure error from last sample

410

Scale to fractional error in clocks/clock. LUT works well.

420

Sum 430

fractional number of clocks to remove each clock

FIGURE 8